SOLUTIA

*Solutions for a better life.*

**Solutia Inc.**
W.G. Krummrich Plant
500 Monsanto Avenue
Sauget, Illinois 62206-1198
*Tel* 618-271-5835

April 10, 2003
(Via certified or express mail)

Mr. Kevin Turner-Environmental Scientist, OSC
U. S. Environmental Protection Agency
c/o Crab Orchard National Wildlife Refuge
8588 Rt. 148
Marion, IL 62959

Mr. Thomas Martin, Esq.
Associate Regional Counsel
77 West Jackson Boulevard (C-14J)
Chicago, IL 60604-3590

**Re: Sauget Sites Area I - May 31, 2000 Unilateral Administrative Order (UAO)**
**Sediment / Soils Removal Action**
**# 23 - April 2003 Monthly Report**

Dear Mr. Turner and Mr. Martin,

Enclosed is the April 2003 Monthly Report for the Sauget Sites Area I May 31, 2000 Unilateral Administrative Order ("UAO") Sediment Removal Action. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section V, and paragraph 3.4. Reporting.

Sincerely,

Alan G. Faust
Project Coordinator
Solutia Inc.

cc: Nabil Fayoumi – USEPA Region 5
Sandra Bron - IEPA
Mike Henry – IDNR
Kevin de la Bruere - USFW
Linda Tape – Husch & Eppenberger
Mayor D. Reed - Cahokia
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)
Mayor P. Sauget - Sauget, IL
Richard Williams - Solutia

# Sauget Sites Area I - Sauget, Illinois

## May 31, 2000 UAO – Dead Creek Sediment Removal Action

## Monthly Report

**Date of Report:** April 10, 2003
**Period Covered:** March 1, 2003 - March 31, 2003
**Next Report Period:** April 1, 2003 - April 30, 2003

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### Background

A Unilateral Administrative Order ("UAO") was issued to Solutia by the U. S. EPA on May 31, 2000, requiring construction of an on-site containment cell, removal of affected creek bed sediments and soils and flood plain soils from specific sections of Dead Creek, and placement of the affected sediments and soils in the newly constructed on-site cell. A Time Critical Removal Action Work Plan ("TCRAWP") was initially submitted to the Agencies on June 30, 2000 for review and approval. Agreements sufficient to proceed with issuance of a request for bids for the containment cell construction were reached in December 2000. Bids were received in late January and evaluated in February 2001.

Fieldwork began on the sediment de-watering phase of the project in November 2000. Installation of the required facilities (piping, pumps, basins, etc.) to de-water the sediments while the containment cell was being constructed was completed and started up in February 2001. Operation of these facilities will continue until all sediments are placed into the containment cell.

Subject to the inclusion of all comments and agreed upon revisions; approval of the containment cell design by U. S. EPA was received on March 5, 2001. A contract for construction of the containment cell was awarded on March 8, 2001 to LMS Environmental Contracting, Inc. ("LMS"). Placement of fill for the Containment Cell berms began on April 23, 2001. A March 30, 2001 revised draft containment cell design was approved by the Agencies in a May 10, 2001 letter. Construction was completed on the Containment Cell on September 13, 2001. A draft Containment Cell Certification Report was submitted for the Agencies' review and approval upon construction completion. The Containment Cell was approved on September 24, 2001 by USEPA and IEPA for receipt of sediment. Placement of sediments into the cell began on September 26, 2001.

An Amendment to the UAO was received on October 29, 2001. The Amendment modified the project scope of the UAO – adding Creek Sector F sediments removal and placement into the Containment Cell. On August 20, 2001, Solutia requested a change in

the Post Removal Confirmation Sampling and analytical protocols. In a November 30, 2001 communication, the Agency responded with revised sampling and analytical protocols.

## Agency Actions / Communications

- Revision 01 of the Draft Groundwater Monitoring Plan - submitted to the Agencies on August 3, 2001 – remained under review.
- The Operations and Maintenance Report - submitted for the Agencies' review and approval on August 28, 2001- remained under review. Portions of the Plan applicable to the placement of sediments have already been approved.

## Work Performed during the reporting period

- Performed weekly inspection of the site.
- Maintained operation of the 50-gpm stormwater treatment system.
- Inspected and maintained the 6oz. geotextile/6 mil scrim reinforced poly cover over the containment cell.
- Maintained stormwater and leachate collection controls around the containment cell.
- Monitored support area facilities.
- Collected groundwater samples during the March 2003 quarterly sampling of the groundwater monitoring wells around the containment cell. Samples will be analyzed for parameters in the Draft Groundwater Monitoring Plan Revision 01.
- The design for the liner to be installed in Creek Sector B is being prepared.
- Final adjustments for the Dead Creek Pumping System have been completed and the system is operational. There are a total of six pumping stations along the course of the creek to enhance flow and eliminate ponding caused by vertically misaligned culverts.

## Data Submittal

Validated data from the December 2002 TSCA Cell Quarterly Groundwater Monitoring sampling event are submitted with this report.

## Work scheduled for next reporting period

- Conduct routine inspection of the containment cell.
- Continue operation of the 50-gpm stormwater treatment system.
- Perform necessary operation and maintenance on the containment cell and temporary treatment system.
- Analyze groundwater samples for parameters in the Draft Groundwater Monitoring Plan Revision 01.
- Place gravel sumps at each pumping location for the Dead Creek Pumping System.

## PROJECT COMPLETION

| | |
|---|---|
| Mobilization | 100 % |
| Berm Construction | 100 % |
| Liner Installation | 100 % |
| Sediment Removal Preparation | 100 % |
| Sediment Excavation (Site M) | 100 % |
| Sediment Excavation (Original Scope of Work) | 100 % |
| Sediment Excavation (Sector F) | 100 % |
| Temporary Cover installation | 100 % |
| Demobilization - Phase I | 100 % |
| Final Cover Installation | 0 % |
| Demobilization - Phase II | 0 % |
| Final Report Preparation | 0 % |

### Problems and Solutions

In discussion with officials from the Village of Cahokia, standing water in separate segments of Dead Creek emerged as a source of concern, given the current public health warnings about the West Nile Virus. The water is stagnant because the creek bottom is significantly lower than culvert inverts.

Because of this concern, Solutia agreed to install temporary pumps to pump the water downstream. This work was completed during the September 1, 2002 – September 30, 2002 reporting period. The permanent pumping system was installed during the January 1, 2002 – January 31, 2002 reporting period. The system consists of six pumps permanently mounted in the creek. The pumps are fitted with level control switches and will pump water downstream through the existing culverts when the water level is below the culvert inverts. During the last reporting period, level adjustments were performed at each of the six (6) pump locations and the system went on-line. Gravel sumps will be installed at each pumping location during the April reporting period.

### Submittal Schedule Status

See attached UAO schedule

### Issues under review

None

### Comments

None

# May 31 Sauget Area I UAO Sediment Removal Action

# SCHEDULE

| Deliverable | Description | Due Date |
|---|---|---|
| Issuance Date | **Date UAO** signed by Muno | **31-May-00** |
| Effective Date | **10 business** day after issuance | **14-Jun-00** |
| Notice of Intent to Comply | **3 business days** after effective date | **19-Jun-00** |
| Designation of Contractor and Project Coordinator | **5 business days** after effective date | **21-Jun-00** |
| Access | **14 calendar days** after effective date | **28-Jun-00** |
| Time Critical Removal Action Work Plan Submittal | **15 business days** after effective date | **7-Jul-00** |
| EPA Approval of TCRA W/P | | **May 10, 2001** |
| Monthly Reports | Begin **30 calendar** days after approval of **TCRA W/P** until completion | **June 10, 2001** |
| Final Report | **60 Calendar days** after completion of **sediments** and soils removal | |
| Mitigation Plan | **60 Calendar days** after completion of **sediments** and soils removal | **May 22, 2002** |

**APPENDIX A**

# Summary of Table of Validated Analytical Data for Ground Water Samples

O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8260 Volatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 |
|---|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | |
| 1,1,1-Trichloroethane | 200c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 700 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 7c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone (MEK) | NC | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | NC | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 4-Methyl-2-pentanone (MIBK) | NC | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Acetone | 700 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Benzene | 5c | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.2 U |
| Bromodichloromethane | 0.2a | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 1a | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromomethane | 9.8 | 9.8 U | 9.8 U | 9.8 U | 9.8 U | 9.8 U | 9.8 U |
| Carbon disulfide | 700 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon tetrachloride | 5c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 100c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroethane | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroform | 0.2a | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloromethane | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Cis/Trans-1,2-Dichloroethene | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 140 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 700c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene chloride (Dichloromethane) | 5c | 4.7 U | 4.7 U | 4.7 U | 4.7 U | 4.7 U | 4.7 U |
| Styrene | 100c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Tetrachloroethene | 5c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 1000c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5c | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Vinyl chloride | 2c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Xylenes, Total | 10000c | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Total VOCs | NC | ND | ND | ND | ND | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8260 Volatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-04 DUP | TCMW-05M | TCMW-05S | TCMW-06M | TCMW-06S |
|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/16/02 | 12/17/02 | 12/17/02 | 12/19/02 | 12/19/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | |
| 1,1,1-Trichloroethane | 200c | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | NC | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethane | 700 | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,1-Dichloroethene | 7c | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloroethane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dichloropropane | 5c | 5 U | 5 U | 5 U | 5 U | 5 U |
| 2-Butanone (MEK) | NC | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | NC | 25 U | 25 U | 25 U | 25 U | 25 U |
| 4-Methyl-2-pentanone (MIBK) | NC | 25 U | 25 U | 25 U | 25 U | 25 U |
| Acetone | 700 | 50 U | 50 U | 50 U | 50 U | 50 U |
| Benzene | 5c | 1.2 U | 1.2 U | 1.2 U | 1.2 U | 1.2 U |
| Bromodichloromethane | 0.2a | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromoform | 1a | 5 U | 5 U | 5 U | 5 U | 5 U |
| Bromomethane | 9.8 | 9.8 U | 9.8 U | 9.8 U | 9.8 U | 9.8 U |
| Carbon disulfide | 700 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon tetrachloride | 5c | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chlorobenzene | 100c | 5 U | 6.9 | 5 U | 5 U | 5 U |
| Chloroethane | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroform | 0.2a | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloromethane | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Cis/Trans-1,2-Dichloroethene | NC | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | 140 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Ethylbenzene | 700c | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene chloride (Dichloromethane) | 5c | 4.7 U | 4.7 U | 4.7 U | 4.7 U | 4.7 U |
| Styrene | 100c | 5 U | 5 U | 5 U | 5 U | 5 U |
| Tetrachloroethene | 5c | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 1000c | 5 U | 5 U | 5 U | 5 U | 5 U |
| Trichloroethene | 5c | 2.7 U | 2.7 U | 2.7 U | 2.7 U | 2.7 U |
| Vinyl chloride | 2c | 10 U | 10 U | 10 U | 10 U | 10 U |
| Xylenes, Total | 10000c | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,3-Dichloropropene | NC | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | NC | 5 U | 5 U | 5 U | 5 U | 5 U |
| Total VOCs | NC | ND | 6.9 | ND | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8270 Semivolatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 |
|---|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | |
| 1,2,4-Trichlorobenzene | 70c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dichlorobenzene | 600c | 10 U | 10 U | 10 U | 0.57 J | 10 U | 10 U |
| 1,3-Dichlorobenzene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4-Dichlorobenzene | 75b | 10 U | 10 U | 10 U | 1.2 J | 10 U | 10 U |
| 2,2'-Oxybis(1-Chloropropane) | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 700 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10a | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| 2,4-Dichlorophenol | 21 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dimethylphenol | 14 | 14 U | 14 U | 14 U | 14 U | 14 U | 14 U |
| 2,4-Dinitrophenol | 0.02a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 0.31a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chlorophenol | 35 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylphenol (o-cresol) | 350 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Nitrophenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20a | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 3-Methylphenol/4-Methylphenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methyl-4,6-dinitrophenol | NC | 13 U | 13 U | 13 U | 13 U | 13 U | 13 U |
| 4-Bromophenylphenyl ether | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Chloro-3-methylphenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 28 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 4-Chlorophenylphenyl ether | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | NC | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 420 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 2100 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(a)anthracene | 0.13a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(a)pyrene | 0.2a,c | 10 U | 10 U | [0.57 J] | 10 U | 10 U | 10 U |
| Benzo(b)fluoranthene | 0.18a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(g,h,i)perylene | NC | 10 U | 10 U | 1.1 J | 10 U | 10 U | 10 U |
| Benzo(k)fluoranthene | 0.17a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater



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# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8270 Semivolatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 |
|---|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | |
| Benzyl butyl phthalate | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbazole | NC | 3.4 U | 3.4 U | 3.4 U | 3.4 U | 3.4 U | 3.4 U |
| Chrysene | 1.5a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-butylphthalate | 700 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-octylphthalate | 140 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenzofuran | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dimethylphthalate | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 280 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachlorobenzene | 0.06a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 50c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 7 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Indeno(1,2,3-cd)pyrene | 0.43a | 10 U | 10 U | [1.2 J] | 10 U | 10 U | 10 U |
| Isophorone | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-propylamine | 1.8a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiphenylamine | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 140 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 3.5 | 3.5 U | 3.5 U | 3.5 U | 3.5 U | 3.5 U | 3.5 U |
| Pentachlorophenol | 1a | 5 U | 5 U | [5 UJ] | 5 U | 5 U | 5 U |
| Phenanthrene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 100c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 210 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethoxy)methane | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethyl)ether | 10a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Ethylhexyl)phthalate | 6a | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Total Semivolatiles | NC | ND | ND | 4.27 | 1.77 | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8270 Semivolatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 |
|---|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | |
| Benzyl butyl phthalate | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbazole | NC | 3.4 U | 3.4 U | 3.4 U | 3.4 U | 3.4 U | 3.4 U |
| Chrysene | 1.5a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-butylphthalate | 700 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-octylphthalate | 140 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenzo(a,h)anthracene | 0.2a | 10 U | 10 U | [1.5 J] | 10 U | 10 U | 10 U |
| Dibenzofuran | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | 5600 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dimethylphthalate | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | 280 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | 280 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachlorobenzene | 0.06a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | 50c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | 7 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Indeno(1,2,3-cd)pyrene | 0.43a | 10 U | 10 U | [1.4 J] | 10 U | 10 U | 10 U |
| Isophorone | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-propylamine | 1.8a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiphenylamine | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 140 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | 3.5 | 3.5 U | 3.5 U | 3.5 U | 3.5 U | 3.5 U | 3.5 U |
| Pentachlorophenol | 1c | 5 U | 5 U | [5 U] | 5 U | 5 U | 5 U |
| Phenanthrene | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | 100c | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | 210 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethoxy)methane | NC | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethyl)ether | 10a | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Ethylhexyl)phthalate | 6c | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Total Semivolatiles | NC | ND | ND | 4.27 | 1.77 | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE
ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8270 Semivolatile Organic Compound Data

| Sample ID | TACO Standards Class I GW | TCMW-04 DUP | TCMW-05M | TCMW-05S | TCMW-06M | TCMW-06S |
|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/16/02 | 12/17/02 | 12/17/02 | 12/19/02 | 12/19/02 |
| Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | |
| 1,2,4-Trichlorobenzene | 70c | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dichlorobenzene | 600c | 10 U | 1.8 J | 10 U | 10 U | 10 U |
| 1,3-Dichlorobenzene | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,4-Dichlorobenzene | 75a | 10 U | 3.4 J | 10 U | 10 U | 10 U |
| 2,2'-Oxybis(1-Chloropropane) | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,5-Trichlorophenol | 700c | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4,6-Trichlorophenol | 10a | 2.1 U | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| 2,4-Dichlorophenol | 14 | 14 U | 14 U | 14 U | 14 U | 14 U |
| 2,4-Dimethylphenol | 0.2ac | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,4-Dinitrophenol | 14 | 14 U | 14 U | 14 U | 14 U | 14 U |
| 2,4-Dinitrotoluene | 0.31a | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2,6-Dinitrotoluene | 0.31a | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chloronaphthalene | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Chlorophenol | 35 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylnaphthalene | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Methylphenol (o-cresol) | 350 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Nitrophenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3,3'-Dichlorobenzidine | 20a | 20 U | 20 U | 20 U | 20 U | 20 U |
| 3-Methylphenol/4-Methylphenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 3-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methyl-4,6-dinitrophenol | NC | 13 U | 13 U | 13 U | 13 U | 13 U |
| 4-Bromophenylphenyl ether | NC | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Chloro-3-methylphenol | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Chloroaniline | 28 | 20 U | 20 U | 20 U | 20 U | 20 U |
| 4-Chlorophenylphenyl ether | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Nitroaniline | NC | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Nitrophenol | NC | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acenaphthene | 420 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acenaphthylene | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Anthracene | 2100 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(a)anthracene | 0.13a | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(a)pyrene | 0.2ac | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(b)fluoranthene | 0.18a | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzo(g,h,i)perylene | NC | 10 U | 10 U | 10 U | 10 U | 2.2 J |
| Benzo(k)fluoranthene | 0.17a | 10 U | 10 U | 10 U | 10 U | 10 U |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 8270 Semivolatile Organic Compound Data

| | Sample ID | TACO Standards Class I GW | TCMW-04 DUP | TCMW-05M | TCMW-05S | TCMW-06M | TCMW-06S |
|---|---|---|---|---|---|---|---|
| | Sample Date | (2/2002) | 12/16/02 | 12/17/02 | 12/17/02 | 12/19/02 | 12/19/02 |
| | Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | |
| Benzyl butyl phthalate | | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbazole | | NC | 3.4 U | 3.4 U | 3.4 U | 3.4 U | 3.4 U |
| Chrysene | | 1.5a | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-butylphthalate | | 700 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Di-n-octylphthalate | | 140 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibenz(a,h)anthracene | | 0.3a | 10 U | 10 U | 10 U | 10 U | [1.6 J] |
| Dibenzofuran | | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Diethylphthalate | | 5600 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dimethylphthalate | | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluoranthene | | 280 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Fluorene | | 280 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachlorobenzene | | 0.06a | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorobutadiene | | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachlorocyclopentadiene | | 50c | 10 U | 10 U | 10 U | 10 U | 10 U |
| Hexachloroethane | | 7 | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| Indeno(1,2,3-cd)pyrene | | 0.43a | 10 U | 10 U | 10 U | 10 U | [1.6 J] |
| Isophorone | | 1400 | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitroso-di-n-propylamine | | 1.8a | 10 U | 10 U | 10 U | 10 U | 10 U |
| N-Nitrosodiphenylamine | | NC | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | | 140 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Nitrobenzene | | 3.5 | 3.5 U | 3.5 U | 3.5 U | 3.5 U | 3.5 U |
| Pentachlorophenol | | 1c | 5 U | 5 U | 5 U | 5 U | [5 UJ] |
| Phenanthrene | | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| Phenol | | 1906 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Pyrene | | 210 | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethoxy)methane | | NC | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Chloroethyl)ether | | 10a | 10 U | 10 U | 10 U | 10 U | 10 U |
| bis(2-Ethylhexyl)phthalate | | 6c | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| Total Semivolatiles | | NC | ND | 5.2 | ND | ND | 5.3 |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 680 Polychlorinated Biphenyl Data

| | Sample ID | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 | TCMW-04 DUP |
|---|---|---|---|---|---|---|---|---|
| | Sample Date | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 | 12/16/02 |
| | Units | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | | | | | |
| Monochlorobiphenyl | | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Dichlorobiphenyl | | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Trichlorobiphenyl | | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Tetrachlorobiphenyl | | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Pentachlorobiphenyl | | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Hexachlorobiphenyl | | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Heptachlorobiphenyl | | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| Octachlorobiphenyl | | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| Nonachlorobiphenyl | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Decachlorobiphenyl | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Total PCBs | | ND | ND | ND | ND | ND | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 680 Polychlorinated Biphenyl Data

| Sample ID | TCMW-05M | TCMW-05S | TCMW-06M | TCMW-06S |
|---|---|---|---|---|
| Sample Date | 12/17/02 | 12/17/02 | 12/19/02 | 12/19/02 |
| Units | ug/l | ug/l | ug/l | ug/l |
| Compound | | | | |
| Monochlorobiphenyl | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Dichlorobiphenyl | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Trichlorobiphenyl | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Tetrachlorobiphenyl | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Pentachlorobiphenyl | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Hexachlorobiphenyl | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Heptachlorobiphenyl | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| Octachlorobiphenyl | 0.3 U | 0.3 U | 0.3 U | 0.3 U |
| Nonachlorobiphenyl | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Decachlorobiphenyl | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Total PCBs | ND | ND | ND | ND |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 6010/7470 Inorganic Data

| Sample ID | TACO Standards Class I GW | TCMW-01M | TCMW-01S | TCMW-02 | TCMW-03M | TCMW-03S | TCMW-04 |
|---|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/17/02 | 12/17/02 | 12/18/02 | 12/18/02 | 12/18/02 | 12/16/02 |
| Units | ug/L | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| Compound | | | | | | | |
| Aluminum | NC | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Antimony | 0.006c | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Arsenic | 0.05c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Barium | 2c | 0.23 | 0.39 | 0.11 | 0.44 | 0.11 | 0.14 |
| Beryllium | 0.004c | 0.004 U | 0.004 U | 0.004 U | 0.004 U | 0.004 U | 0.004 U |
| Cadmium | 0.005c | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U |
| Calcium | NC | 160 | 190 | 110 | 190 | 150 | 130 |
| Chromium | 0.1c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Cobalt | 1e | 0.01 U | 0.0045 J | 0.0029 J | 0.01 U | 0.003 J | 0.0039 J |
| Copper | 0.65c | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Iron | NC | 21 | 0.12 | 0.05 U | 23 | 3.6 | 0.05 U |
| Lead | 0.0075c | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.002 J |
| Magnesium | NC | 38 | 31 | 22 | 45 | 34 | 30 |
| Manganese | 0.15c | [0.97] | [0.39] | [0.44] | [1.3] | [1.4] | [0.56] |
| Mercury | 0.002c | 0.0002 UJ | 0.0002 UJ | 0.0002 U | 0.0002 U | 0.0002 U | 0.0002 UJ |
| Nickel | 0.1c | 0.04 U | 0.039 J | 0.0091 J | 0.04 U | 0.04 U | 0.0086 J |
| Potassium | NC | 6.8 | 12 | 6.1 | 13 | 6.8 | 6.4 |
| Selenium | 0.05c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Silver | 0.05c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Sodium | NC | 10 | 83 | 28 | 120 | 33 | 7 |
| Thallium | 0.002c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Vanadium | 0.049 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Zinc | 5c | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.0095 J | 0.02 U |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards.
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedure specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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O'BRIEN & GERE
ENGINEERS, INC.

# Appendix A
## Solutia
## Sauget Area 1
## Ground Water - December 2002
## Method 6010/7470 Inorganic Data

| Sample ID | TACO Standards Class I GW | TCMW-04 DUP | TCMW-05M | TCMW-05S | TCMW-06M | TCMW-06S |
|---|---|---|---|---|---|---|
| Sample Date | (2/2002) | 12/16/02 | 12/17/02 | 12/17/02 | 12/19/02 | 12/19/02 |
| Units | ug/L | mg/l | mg/l | mg/l | mg/l | mg/l |
| Compound | | | | | | |
| Aluminum | NC | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Antimony | 0.006c | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Arsenic | 0.05c | 0.01 U | 0.007 J | 0.01 U | 0.0038 J | 0.01 U |
| Barium | 2c | 0.14 | 0.19 | 0.33 | 0.3 | 0.2 |
| Beryllium | 0.004c | 0.004 U | 0.004 U | 0.004 U | 0.004 U | 0.004 U |
| Cadmium | 0.005c | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U |
| Calcium | NC | 130 | 150 | 180 | 97 | 130 |
| Chromium | 0.1c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Cobalt | 1e | 0.004 J | 0.01 U | 0.01 U | 0.01 U | 0.0015 J |
| Copper | 0.65e | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |
| Iron | NC | 0.05 U | 26 | 0.05 U | 7.4 | 0.05 U |
| Lead | 0.0075e | 0.005 U | 0.0017 J | 0.005 U | 0.005 U | 0.005 U |
| Magnesium | NC | 30 | 36 | 46 | 21 | 36 |
| Manganese | 0.15e | [0.56] | [1.2] | 0.049 | [0.85] | [0.21] |
| Mercury | 0.002c | 0.0002 UJ | 0.0002 UJ | 0.0002 UJ | 0.0002 U | 0.0002 U |
| Nickel | 0.1e | 0.0089 J | 0.015 J | 0.0076 J | 0.04 U | 0.01 J |
| Potassium | NC | 6.5 | 6.5 | 7.8 | 4.3 | 7.1 |
| Selenium | 0.05c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Silver | 0.05c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Sodium | NC | 7.1 | 14 | 5.7 | 17 | 18 |
| Thallium | 0.002c | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Vanadium | 0.049 | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Zinc | 5e | 0.02 U | 0.02 U | 0.02 U | 0.02 U | 0.02 U |

NOTES: U - not detected, J - estimated value, N - tentatively identified, R - rejected, M - EMPC, D - result from diluted analysis, EB - equipment blank, DUP - field duplicate, NC - no criteria, [ ] - exceeds TACO Class I Ground Water Standards
a - The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.
b - Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c - Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.



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